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(54) Title: METHODS AND SYSTEMS FOR FAULT TOLERANT QUANTUM CIRCUIT DESIGN

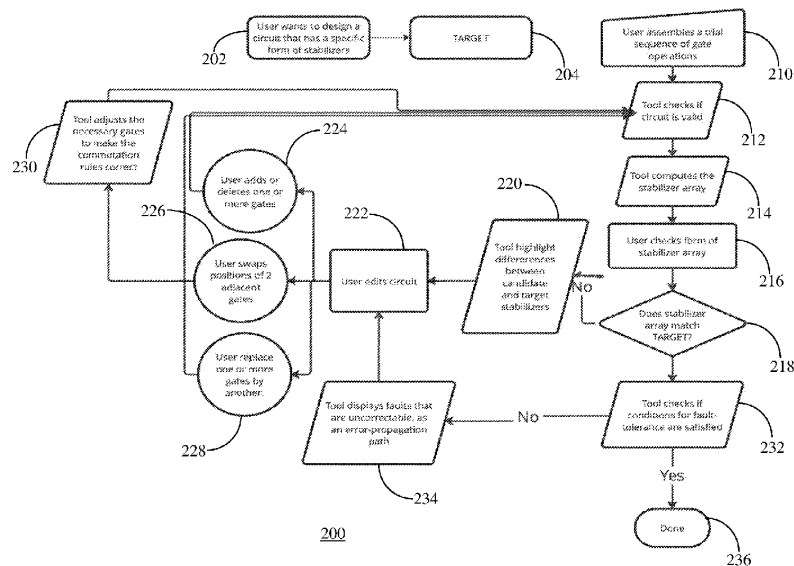


FIG. 2

(57) Abstract: Methods and system for quantum circuit design are provided. According to at least one aspect of the present embodiments, a computer-implemented method for enabling a user to design a quantum circuit includes presenting a user interface to the user, the user interface comprising a palette, an editor and an output display. The method also includes designing the quantum circuit in response to the user selecting one or more user interface representations of components and/or circuit operations presented in the palette and connecting a plurality of the one or more user interface representations of components and/or circuit operations in the editor in a user-assembled arrangement and computing circuit properties of the quantum circuit and displaying at least a portion of the circuit properties in the output display, wherein computing the circuit properties comprises determining if the quantum circuit is a valid quantum circuit.

[Continued on next page]

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